UNITED STATES PATENT AND TRADEMARK OFFICE

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EXAMINER
STACE, BRENT S

ART UNIT	PAPER NUMBER
2161	

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11/07/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<table>
<tr>
<td rowspan="2">Office Action Summary</td>
<td>Application No.
10/667,712</td>
<td>Applicant(s)
MAEDA ET AL.</td>
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<tr>
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BRENT STACE</td>
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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>29 October 2008</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1,3-5,7-9,13,15,20,22,23,25-27,29-31,35,37,42 and 44-46</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1,3-5,7-9,13,15,20,22,23,25-27,29-31,35,37,42 and 44-46</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>22 September 2003</u> is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Remarks

1.   This communication is responsive to the amendment filed October 29th, 2008.

Claims 1, 3-5, 7-9, 13, 15, 20, 22, 23, 25-27, 29-31, 35, 37, 42, and 44-46 are pending.

In the amendment filed October 29th, 2008, Claims 1, 3, 5, 7, 13, 15, 20, 22, 23, 25, 27,

29, 35, 37, 42, and 44 are amended, Claims 45 and 46 are new, Claims 2, 6, 10-12, 14,

16-19, 21, 24, 28, 32-34, 36, 38-41, and 43 are canceled, and Claims 1, 5, 13, 20, 23,

27, 35, 42, and 45 are independent Claims. The examiner acknowledges that no new

matter was introduced and the claims are supported by the specification.

Response to Arguments

2.   Applicant's arguments filed October 29th, 2008 with respect to Claims 1, 3-5, 7-9,

13, 15, 20, 22, 23, 25-27, 29-31, 35, 37, 42, and 44-46 have been considered but are

either not persuasive or are moot in view of the new ground(s) of rejection. See below

for a detailed explanation of the rejections.

3.   As to the applicant's arguments with respect to exemplary Claims 45 and 46 for

the prior art(s) allegedly not teaching or suggesting "**displaying anything in the**

structure in place of the XML portions that were not received," the examiner

respectfully submits that this argument is moot in view of the new ground(s) of rejection

below.

4.   As to the applicant's arguments with respect to exemplary Claims 1, 5, 13, 20,

23, 27, 35, and 42 for the prior art(s) allegedly not teaching or suggesting "**descendant**

substitute display information storage means [or step]," the examiner respectfully

disagrees. At least one way this argument can be seen as being taught by the prior art

is that the claimed "descendant substitute display information" is Piotrowski's structure

node for each sub-tree that "indicates the relationship of the sub-tree to other sub-trees"

(cited Piotrowski, paragraph [0017]). Since this relationship information is stored in the

structure node, there is a time/step/means when/where the descendant substitute

display information is stored.

5.   As to the applicant's arguments with respect to exemplary Claims 1, 5, 13, 20,

23, 27, 35, and 42 for the prior art(s) allegedly not teaching or suggesting "**descendant**

substitute display information addition means [or step]," the examiner respectfully

disagrees. As discussed above, adding descendant substitute display information can

be viewed as storing descendant substitute display information.

6.   As to the applicant's arguments with respect to exemplary Claims 1, 5, 13, 20,

23, 27, 35, and 42 for the prior art(s) allegedly not teaching or suggesting ""**extraction**

means [or step]" that "extracts…descendant substitute display information from

the node stream,"" the examiner respectfully disagrees. At least one way this

argument can be seen as being taught by the prior art is that Piotrowski, paragraph

[0015] teaches that an XML receiver (e.g. computer) receives and decodes prioritized

XML portions. This appears to be an extraction means/step. The substitute display

information (structure nodes as shown above) aids in the computer understanding what

is missing in the document since the structure node indicates the relationship of the

sub-tree to other sub-trees. This is indicated in Piotrowski, paragraph [0017] teaching

that the structure nodes are used by the receiver to "reconstruct the structure of the full

tree [the full XML document] provided enough of the streamed XML content is

received." The structure nodes are wrapped around transmitting sub-trees (Piotrowski,

paragraph [0017]). As such, the structure nodes are transmitted and decoded/extracted

in order for the receiver to reconstruct the streamed XML document.

7.   As to the applicant's arguments with respect to exemplary Claims 1, 5, 13, 20,

23, 27, 35, and 42 for the prior art(s) allegedly not teaching or suggesting

""**reconstruction means [or step]" that "adds a substitute structure portion**

relating **to the descendant substitute display information**,"" the examiner

respectfully disagrees. At least one way this argument can be seen as being taught by

the prior art is that the "reconstructions means [or step]" argument has been met above.

As shown above, the descendant substitute display information is/are the structure

node(s). In decoding the structure nodes, the receiver becomes aware of other sub-

trees (received or not) since the structure node indicates the relationship of the sub-tree

to other sub-trees. The substitute structure portion is the sub-tree(s). The related sub-

trees are made known (added) to the receiving computer when the receiving computer

reconstructs/decodes the XML document. These substituted structure portions are

related to the descendant substitute display information since the relations are stored in

the structure nodes (Piotrowski, paragraph [0017]).

8.   As to the applicant's arguments with respect to exemplary Claims 1, 5, 13, 20,

23, 27, 35, and 42 for the prior art(s) allegedly not teaching or suggesting ""**display**

means [or step]" that "displays said descendant substitute display information,""

the examiner respectfully disagrees. At least one way this argument can be seen as being taught is by Piotrowski, paragraph [0018] with Piotrowski, paragraph [0025] teaching displaying and presenting the received portions of the XML document. As shown above, the descendant substitute display information is the structure nodes. Also, as shown above, the descendant substitute display information (structure node(s)) contain (wrap) the sub-tree(s) transmitted and received by the transmitter and receiver, respectfully. Since the descendant substitute display information (structure node(s)) are received and displayed, Piotrowski appears to teach ""display means [or step]" that "displays said descendant substitute display information.""

9.   The other claims argued merely because of a dependency on a previously argued claim(s) in the arguments presented to the examiner, dated October 29th, 2008, are moot in view of the examiner's interpretation of the claims and art and are still considered rejected based on their respective rejections from at least a prior Office action (part(s) of recited again below).

Response to Amendment

Specification

10.   The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Drawings

11.   In light of the applicant's respective arguments or respective amendments, some previous drawing objections to the drawings have been withdrawn.

12.   Figs. 6, 8, 9, 32, and 34-38 include dark portions that hinder the readability of the drawings and, thus, hinder understanding of the claimed invention.

13.   Since the lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors, Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the drawings. For example, the drawings should be carefully checked to ensure that all reference numerals are described in the specification, that no one reference numeral describes two separate drawing elements, or that the specification contains no reference to numerals not in the drawings.

Claim Objections

14.   In light of the applicant's respective arguments or respective amendments, the previous claim objections to the claims have been withdrawn.

Claim Rejections - 35 USC § 112

15.   In light of the applicant's respective arguments or respective amendments, the previous 35 USC § 112 rejections to the claims have been withdrawn.

Claim Rejections - 35 USC § 102

16.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

17.   Claims 13, 15, 35, and 37 are rejected under 35 U.S.C. 102(e) as being

anticipated by U.S. Patent Application Publication No. 2003/0236903 (Piotrowski).

Claim 13 can be mapped to Piotrowski as follows: "A tree-structured document

receiving apparatus which receives a signal formed by converting on the basis of a

predetermined network protocol a node stream [Piotrowski, paragraph [0022] with

Piotrowski, paragraph [0015] with Piotrowski, Fig. 1] formed in such a manner that a

node priority is set with respect to each of nodes [Piotrowski, paragraph [0019] with

Piotrowski, paragraph [0017] with Piotrowski, paragraph [0022]] of a tree-structured

document on the basis of the importance of an information portion to be presented from

the node to a receiving-side user [Piotrowski, paragraph [0015] with Piotrowski,

paragraphs [0007]-[0008] with Piotrowski, paragraph [0025]] while satisfying two

conditions: a first condition that the node priority of the node is equal to or lower than

that of a node which is an ancestor of that node, [Piotrowski, paragraph [0017] with

Piotrowski, paragraphs [0008]-[0009]] and a second condition that if a plurality of nodes

of the same priority exist, the nodes necessarily constitute one subtree; [Piotrowski,

paragraph [0017] with Piotrowski, paragraphs [0008]-[0009]] and nodes or subtrees are

arranged in a sequence on the basis of the node priorities, [Piotrowski, paragraphs
[0007]-[0008]] said tree-structured document receiving apparatus having:

- receiving means of restoring the node stream from the signal received by the
  predetermined network protocol; [Piotrowski, paragraph [0015] with Piotrowski,
  paragraphs [0023]-[0025]]

- extraction means of extracting at least one of the nodes or the subtrees from the
  node stream restored by said receiving means according to the sequence of
  arrangement in the node stream; [Piotrowski, paragraph [0015] with Piotrowski,
  paragraphs [0023]-[0025]]

- reconstruction means of adding at least one of the nodes or the subtree in the
  extraction order to the tree-structured document under reconstruction;
  [Piotrowski, paragraph [0015] with Piotrowski, paragraphs [0023]-[0025]] and

- display means of displaying the tree-structured document in the current
  reconstructed state; [Piotrowski, paragraph [0025] with Piotrowski, paragraph
  [0009]]

- wherein, in the node stream restored by said receiving means, descendant
  substitute display information for substitute display on said display means for
  descendant nodes with respect to at least one of a node or a subtree existing as
  a parent of the descendant node is added immediately after at least one of the
  node or the subtree existing as a parent of the descendant node; [Piotrowski,
  paragraph [0017] with Piotrowski, paragraph [0018]]

- said extraction means extracts at least one of the nodes or the subtrees and the descendant substitute display information from the node stream restored by said receiving means according to the sequence of arrangement in the node stream; [Piotrowski, paragraph [0017] with Piotrowski, paragraph [0018] with Piotrowski, paragraph [0015] with Piotrowski, paragraphs [0023]-[0025]] and

- said reconstruction means adds a substitute structure portion relating to the descendant substitute display information to the tree structure under reconstruction in place of the descendant node relating to the descendant substitute display information when said extraction means extracts the descendant substitute display information; [Piotrowski, paragraph [0017] with Piotrowski, paragraph [0018] with Piotrowski, paragraph [0009]] and

- wherein said display means displays said descendant substitute display information" [Piotrowski, paragraph [0018] with Piotrowski, paragraph [0025]].

Claim 15 can be mapped to Piotrowski as follows: "The tree-structured document receiving apparatus according to claim 13, wherein said reconstruction means immediately replaces the substitute tree-structured portion relating to the descendant substitute display information in the tree structure under reconstruction with the descendant node when said extraction means extracts the descendant node while substitute display for the descendant node according to the descendant substitute display information is being performed" [Piotrowski, paragraph [0009] with Piotrowski, paragraph [0025]].

Claims 35 and 37 encompass substantially the same scope of the invention as

that of Claims 13 and15, respectfully, in addition to a method and some steps for

performing the system means of Claims 13 and 15, respectfully. Therefore, Claims 35

and 37 are rejected for the same reasons as stated above with respect to Claims 13

and 15, respectfully.

Claim Rejections - 35 USC § 103

18.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

19.   This application currently names joint inventors. In considering patentability of

the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

20.   Claims 1, 3, 4, 23, 25, and 26 are rejected under 35 U.S.C. 103(a) as being

unpatentable over U.S. Patent Application Publication No. 2003/0236903 (Piotrowski) in

view of U.S. Patent No. 5,899,995 (Miller et al.).

For **Claim 1**, Piotrowski teaches: "A tree-structured document transmitting and

receiving system having a tree-structured document transmitting apparatus and a tree-

structured document receiving apparatus, [Piotrowski, Fig. 1 with Piotrowski, paragraph

[0022]] said tree-structured document transmitting apparatus having:

- …of storing a plurality of tree-structured documents; [Piotrowski, paragraphs

  [0022]-[0023]]

- node priority presentation means of presenting a node priority [Piotrowski,

  paragraph [0019]] which is set with respect to each of nodes [Piotrowski,

  paragraph [0017] with Piotrowski, paragraph [0022]] of a tree-structured

  document on the basis of the importance of an information portion to be

  presented from the node to a receiving-side user [Piotrowski, paragraph [0015]

  with Piotrowski, paragraphs [0007]-[0008] with Piotrowski, paragraph [0025]]

  while satisfying two conditions: a first condition that the node priority of the node

  is equal to or lower than that of a node which is an ancestor of that node,

  [Piotrowski, paragraph [0017] with Piotrowski, paragraphs [0008]-[0009]] and a

  second condition that if a plurality of nodes of the same priority exist, the nodes

  necessarily constitute one subtree; [Piotrowski, paragraph [0017] with Piotrowski,

  paragraphs [0008]-[0009]]

- node stream generation means [Piotrowski, paragraph [0022]] of reading out a tree-structured document to be transmitted from the tree-structured document storage means and generating a node stream in which nodes and/or subtrees are arranged in a sequence on the basis of node priorities presented by said node priority presentation means; [Piotrowski, paragraphs [0007]-[0008]] and

- transmitting means of converting said node stream into a signal based on a predetermined network protocol and transmitting the signal, [Piotrowski, paragraph [0015] with Piotrowski, Fig. 1] said tree-structured document receiving apparatus having:

- receiving means of restoring the node stream from the signal received by said predetermined network protocol from said transmitting means; [Piotrowski, paragraph [0015] with Piotrowski, paragraphs [0023]-[0025]]

- extraction means of extracting at least one of the nodes or the subtrees from the node stream restored by said receiving means according to the sequence of arrangement in the node stream; [Piotrowski, paragraph [0015] with Piotrowski, paragraphs [0023]-[0025]]

- reconstruction means of adding at least one of the nodes or the subtrees in the extraction order to the tree-structured document under reconstruction; [Piotrowski, paragraph [0015] with Piotrowski, paragraphs [0023]-[0025]] and

- display means of displaying the tree-structured document in the current reconstructed state; [Piotrowski, paragraph [0025] with Piotrowski, paragraph [0009]]

- wherein said tree-structured document transmitting apparatus further has:

- descendant substitute display information storage means of storing descendant
  substitute display information for substitute display on said display means of said
  tree-structured document receiving apparatus for descendant nodes with respect
  to at least one of a node or a subtree existing as a parent of the descendant
  node; [Piotrowski, paragraph [0017] with Piotrowski, paragraph [0018]] and

- descendant substitute display information addition means of making the node
  stream generation means generate as said node stream a stream in which the
  descendant substitute display information read out from said descendant
  substitute display information storage means is added immediately after at least
  one of the node or the subtree existing as a parent of the descendant node,
  [Piotrowski, paragraph [0017] with Piotrowski, paragraph [0018]] and

- wherein, in said tree-structured document receiving apparatus, said extraction
  means extracts at least one of the nodes or the subtrees and the descendant
  substitute display information from the node stream restored by said receiving
  means according to the sequence of arrangement in the node stream;
  [Piotrowski, paragraph [0017] with Piotrowski, paragraph [0018] with Piotrowski,
  paragraph [0015] with Piotrowski, paragraphs [0023]-[0025]] and

- said reconstruction means adds a substitute structure portion relating to the
  descendant substitute display information to the tree structure under
  reconstruction in place of the descendant node relating to the descendant
  substitute display information when said extraction means extracts the

descendant substitute display information [Piotrowski, paragraph [0017] with

Piotrowski, paragraph [0018] with Piotrowski, paragraph [0009]]

- wherein said display means displays said descendant substitute display

  information" [Piotrowski, paragraph [0018] with Piotrowski, paragraph [0025]].

  Piotrowski discloses the above limitations but does not expressly teach:

- "...tree-structured document storage means."

  With respect to Claim 1, an analogous art, Miller, teaches:

- "...tree-structured document storage means" [Miller, col. 6, lines 60-67].

  It would have been obvious to one of ordinary skill in the art at the time of

invention to combine Miller with Piotrowski because both inventions are directed

towards storing files.

Miller's invention would have been expected to successfully work well with

Piotrowski's invention because both inventions use storage areas. Piotrowski discloses

a method and apparatus for structured streaming of an XML document comprising

storage devices, however Piotrowski does not expressly disclose that the storage

devices are tree-structured. Miller discloses a method and apparatus for automatically

organizing information comprising storage areas and a storage manager that files

documents into appropriate folders and/or storage areas.

It would have been obvious to one of ordinary skill in the art at the time of

invention to take the folders/files from Miller and install it into the invention of Piotrowski,

thereby offering the obvious advantage of having an organized way of storing items on

the storage device.

Claim 3 can be mapped to Piotrowski (as modified by Miller) as follows: "The tree-structured document transmitting and receiving system according to claim 1, wherein, in said tree-structured document receiving apparatus, said reconstruction means immediately replaces the substitute tree-structured portion relating to the descendant substitute display information in the tree structure under reconstruction with the descendant node when said extraction means extracts the descendant node while substitute display for the descendant node according to the descendant substitute display information is being performed" [Piotrowski, paragraph [0009] with Piotrowski, paragraph [0025]].

Claim 4 can be mapped to Piotrowski (as modified by Miller) as follows: "The tree-structured document transmitting and receiving system according to claim 1, wherein said tree-structured document transmitting apparatus further has node priority setting means of determining the importance of an information portion to be presented from each node to the receiving-side user on the basis of a content of the node, an attribute of the node, a content of the document, an attribute of the document, the tree structure, a user instruction from a transmitting-side user, or a user instruction from the receiving-side user, and setting a node priority on the basis of the determination, [Piotrowski paragraph [0019]] and

- wherein, in said tree-structured document transmitting apparatus, said node priority presentation means presents the node priority set by said node priority setting means" [Piotrowski paragraph [0019]].

For **Claim 10**, Piotrowski teaches: "A tree-structured document transmitting

apparatus [Piotrowski, Fig. 1 with Piotrowski, paragraph [0022]] having:

- … of storing a plurality of tree-structured documents; [Piotrowski, paragraphs

  [0022]-[0023]]

- node priority presentation means of presenting a node priority [Piotrowski,

  paragraph [0019]] which is set with respect to each of nodes [Piotrowski,

  paragraph [0017] with Piotrowski, paragraph [0022]] of a tree-structured

  document on the basis of the importance of an information portion to be

  presented from the node to a receiving-side user [Piotrowski, paragraph [0015]

  with Piotrowski, paragraphs [0007]-[0008] with Piotrowski, paragraph [0025]]

  while satisfying two conditions: a first condition that the node priority of the node

  is equal to or lower than that of a node which is an ancestor of that node,

  [Piotrowski, paragraph [0017] with Piotrowski, paragraphs [0008]-[0009]] and a

  second condition that if a plurality of nodes of the same priority exist, the nodes

  necessarily constitute one subtree; [Piotrowski, paragraph [0017] with Piotrowski,

  paragraphs [0008]-[0009]]

- node stream generation means [Piotrowski, paragraph [0022]] of reading out a

  tree-structured document to be transmitted from the tree-structured document

  storage means and generating a node stream in which at least one of nodes or

  the subtrees are arranged in a sequence on the basis of node priorities

  presented by said node priority presentation means; [Piotrowski, paragraphs

  [0007]-[0008]] and

- transmitting means of converting said node stream into a signal based on a

  predetermined network protocol and transmitting the signal" [Piotrowski,

  paragraph [0015] with Piotrowski, Fig. 1].

  Piotrowski discloses the above limitations but does not expressly teach:

- "…tree-structured document storage means."

  With respect to Claim 10, an analogous art, Miller, teaches:

- "…tree-structured document storage means" [Miller, col. 6, lines 60-67].

  It would have been obvious to one of ordinary skill in the art at the time of

invention to combine Miller with Piotrowski because both inventions are directed

towards storing files.

Miller's invention would have been expected to successfully work well with

Piotrowski's invention because both inventions use storage areas. Piotrowski discloses

a method and apparatus for structured streaming of an XML document comprising

storage devices, however Piotrowski does not expressly disclose that the storage

devices are tree-structured. Miller discloses a method and apparatus for automatically

organizing information comprising storage areas and a storage manager that files

documents into appropriate folders and/or storage areas.

It would have been obvious to one of ordinary skill in the art at the time of

invention to take the folders/files from Miller and install it into the invention of Piotrowski,

thereby offering the obvious advantage of having an organized way of storing items on

the storage device.

Claim 11 can be mapped to Piotrowski (as modified by Miller) as follows: "The tree-structured document transmitting apparatus according to claim 10, further having:

- descendant substitute display information storage means of storing descendant substitute display information for substitute display on said display means of said tree-structured document receiving apparatus for descendant nodes with respect to at least one of a node or a subtree existing as a parent of the descendant node; [Piotrowski, paragraph [0017] with Piotrowski, paragraph [0018]] and

- descendant substitute display information addition means of making the node stream generation means generate as said node stream a stream in which the descendant substitute display information read out from said descendant substitute display information storage means is added immediately after at least one of the node or the subtree existing as a parent of the descendant node" [Piotrowski, paragraph [0017] with Piotrowski, paragraph [0018]].

Claim 12 can be mapped to Piotrowski (as modified by Miller) as follows: "The tree-structured document transmitting apparatus according to claim 10, further having:

- node priority setting means of determining the importance of an information portion to be presented from each node to a receiving-side user on the basis of a content of the node, an attribute of the node, a content of the document, an attribute of the document, the tree structure, a user instruction from a transmitting-side user, or a user instruction from the receiving-side user, and setting a node priority on the basis of the determination, [Piotrowski paragraph [0019]]

- wherein said node priority presentation means presents the node priority set by

  said node priority setting means" [Piotrowski paragraph [0019]].

Claims 23, 25, and 26 encompass substantially the same scope of the invention

as that of Claims 1, 3, and 4, respectfully, in addition to a method and some steps for

performing the system means of Claims 1, 3, and 4, respectfully. Therefore, Claims 23,

25, and 26 are rejected for the same reasons as stated above with respect to Claims 1,

3, and 4, respectfully.

21.   Claims 5, 7-9, 27, and 29-31 are rejected under 35 U.S.C. 103(a) as being

unpatentable over U.S. Patent Application Publication No. 2003/0236903 (Piotrowski) in

view of U.S. Patent No. 5,899,995 (Miller et al.) in view of U.S. Patent No. 5,790,937

(Gutle), further in view of U.S. Patent No. 5,907,841 (Sumita).

For **Claim 5**, Piotrowski teaches: "A tree-structured document transmitting and

receiving system having a tree-structured document transmitting apparatus and a tree-

structured document receiving apparatus, [Piotrowski, Fig. 1 with Piotrowski, paragraph

[0022]] said tree-structured document transmitting apparatus having:

- ... of storing a plurality of tree-structured documents; [Piotrowski, paragraphs

  [0022]-[0023]]

- ... document-by-document encoding means [Piotrowski, paragraphs [0015]-

  [0017]]..., and each having node priority presentation means [Piotrowski,

  paragraph [0019]] and node stream generation means, [Piotrowski, paragraph

  [0022]] said node priority presentation means presenting a node priority which is

set with respect to each of nodes [Piotrowski, paragraph [0017] with Piotrowski,

paragraph [0022]] of said assigned tree-structured document on the basis of the

importance of an information portion to be presented from the node to a

receiving-side user [Piotrowski, paragraph [0015] with Piotrowski, paragraphs

[0007]-[0008] with Piotrowski, paragraph [0025]] while satisfying two conditions: a

first condition that the node priority of the node is equal to or lower than that of a

node which is an ancestor of that node, [Piotrowski, paragraph [0017] with

Piotrowski, paragraphs [0008]-[0009]] and a second condition that if a plurality of

nodes of the same priority exist, the nodes necessarily constitute one subtree,

[Piotrowski, paragraph [0017] with Piotrowski, paragraphs [0008]-[0009]] said

node stream generation means reading out a tree-structured document to be

transmitted from the tree-structured document storage means and generating a

node stream in which at least one of the nodes or the subtrees are arranged in a

sequence on the basis of node priorities presented by said node priority

presentation means; [Piotrowski, paragraphs [0007]-[0008]]

- … stream generation means [Piotrowski, paragraph [0022]] of generating one

  multiplexed stream by multiplexing the node streams from said document-by-

  document encoding means, sequences in which at least one of the nodes or the

  subtrees of the tree-structured documents are arranged being placed in the

  multiplexed stream according to the inter-document priorities presented by said

  inter-document priority presentation means with respect to the tree-structured

documents containing at least one of the nodes or the subtrees; [Piotrowski,

paragraphs [0007]-[0008]] and

- transmitting means of transmitting said multiplexed stream by converting said

  multiplexed stream on the basis of a predetermined network protocol,

  [Piotrowski, paragraph [0015] with Piotrowski, Fig. 1] said tree-structured

  document receiving apparatus having:

- receiving means of restoring the multiplexed stream from the signal received by

  said predetermined network protocol from said transmitting means; [Piotrowski,

  paragraph [0015] with Piotrowski, paragraphs [0023]-[0025]]

- ... document-by-document decoding means...[Piotrowski, paragraph [0015] with

  Piotrowski, paragraphs [0023]-[0025]], and each including extraction means and

  reconstruction means, said extraction means extracting the nodes subtrees from

  said processing-assigned node stream according to the sequence of

  arrangement in the node stream, said reconstruction means adding at least one

  of the node or the subtree in the extraction order to the tree-structured document

  under reconstruction; [Piotrowski, paragraph [0015] with Piotrowski, paragraphs

  [0023]-[0025]] and

- display means of displaying the tree-structured document under reconstruction in

  each document-by-document decoding means, the tree structure being displayed

  in the current reconstructed state at a corresponding position; [Piotrowski,

  paragraph [0025] with Piotrowski, paragraph [0009]]

- wherein, in said tree-structured document transmitting apparatus, said document-by-document encoding means further includes:

- descendant substitute display information storage means of storing descendant substitute display information for substitute display on said display means of said tree-structured document receiving apparatus for descendant nodes with respect to at least one of a node or a subtree existing as a parent of the descendant node; [Piotrowski, paragraph [0017] with Piotrowski, paragraph [0018]] and

- descendant substitute display information addition means of making the node stream generation means generate as said node stream a stream in which the descendant substitute display information read out from said descendant substitute display information storage means is added immediately after at least one of the node or a subtree existing as a parent of the descendant node, [Piotrowski, paragraph [0017] with Piotrowski, paragraph [0018]] and

- wherein, in each document-by-document decoding means of said tree-structured document receiving apparatus, said extraction means extracts the nodes or subtrees and the descendant substitute display information from the node stream restored by said receiving means according to the sequence of arrangement in the node stream; [Piotrowski, paragraph [0017] with Piotrowski, paragraph [0018] with Piotrowski, paragraph [0015] with Piotrowski, paragraphs [0023]-[0025]] and

- said reconstruction means adds a substitute structure portion relating to the descendant substitute display information to the tree structure under reconstruction in place of the descendant node relating to the descendant

substitute display information when said extraction means extracts the

descendant substitute display information;" [Piotrowski, paragraph [0017] with

Piotrowski, paragraph [0018] with Piotrowski, paragraph [0009]] and

- wherein said display means displays said descendant substitute display

  information" [Piotrowski, paragraph [0018] with Piotrowski, paragraph [0025]].

  Piotrowski discloses the above limitations but does not expressly teach:

- "...tree-structured document storage means

- ...a plurality of...each assigned processing of one tree-structured document in a

  plurality of tree-structured documents to be transmitted

- ...inter-document priority presentation means of presenting inter-document

  priorities set as transmission priorities with respect to the plurality of tree-

  structured documents to be transmitted;

- ...multiplexed

- ...demultiplexing means of demultiplexing the multiplexed stream into the plurality

  of node streams contained in the multiplexed stream;

- a plurality of ...each assigned processing of one node stream in the plurality of

  node streams demultiplexed by said demultiplexing means."

  With respect to Claim 5, an analogous art, Miller, teaches:

- "...tree-structured document storage means" [Miller, col. 6, lines 60-67].

  With respect to Claim 5, an analogous art, Gutle, teaches:

- "...multiplexed [Gutle, col. 2, lines 10-30]

- ...demultiplexing means of demultiplexing the multiplexed stream into the plurality of node streams contained in the multiplexed stream;" [Gutle, col. 2, lines 10-30].

With respect to Claim 5, an analogous art, Sumita, teaches:

- "...inter-document priority presentation means of presenting inter-document priorities set as transmission priorities with respect to the plurality of tree-structured documents to be transmitted" [Sumita, cols. 21-22, lines 65-6 with Piotrowski, paragraph [0019]].

With respect to Claim 5 case law teaches:

- "...a plurality of...each assigned processing of one tree-structured document in a plurality of tree-structured documents to be transmitted [*In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960)]

- ...a plurality of ...each assigned processing of one node stream in the plurality of node streams demultiplexed by said demultiplexing means" [*In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960)].

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Miller, Sumita and Gutle with Piotrowski because the inventions are directed towards storing and transmitting files.

Miller, Sumita and Gutle's inventions would have been expected to successfully work well with Piotrowski's invention because the inventions use storage areas and transmit files. Piotrowski discloses a method and apparatus for structured streaming of an XML document comprising storage devices, however Piotrowski does not expressly

disclose that the storage devices are tree-structured, presenting inter-document

priorities, and transferring using multiplexing/demultiplexing. Miller discloses a method

and apparatus for automatically organizing information comprising storage areas and a

storage manager that files documents into appropriate folders and/or storage areas.

Sumita discloses a document detection system with improved document detection

efficiency comprising displaying documents according to priority. Gutle discloses a

method and apparatus for the distribution of multi-media documents comprising

multiplexing and demutliplexing a stream of data.

It would have been obvious to one of ordinary skill in the art at the time of

invention to take the folders/files from Miller, the multiplexing/demultiplexing from Gutle,

and the presenting inter-document priorities from Sumita and install it into the invention

of Piotrowski, thereby offering the obvious advantage of having an organized way of

storing items on the storage device, sending multiple things through a stream of data

(increasing the speed), and displaying relevant documents first according to their

priority.

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to modify Piotrowski such that Piotrowski has a plurality of

document-by-document encoding and decoding means each assigned processing of

one tree-structured document in a plurality of tree-structured documents to be

transmitted since it has been held that a duplication of parts with function (*In re Harza*,

274 F.2d 669, 124 USPQ 378 (CCPA 1960)) is obvious. In this case it is obvious

because it would increase the speed of the Piotrowski so Piotrowski's invention does more than one document at a time.

Claim 7 can be mapped to Piotrowski (as modified by Miller, Sumita and Gutle) as follows: "The tree-structured document transmitting and receiving system according to claim 5, wherein, in each document-by-document decoding means of said tree-structured document receiving apparatus, said reconstruction means immediately replaces the substitute tree-structured portion relating to the descendant substitute display information in the tree structure under reconstruction with the descendant node when said extraction means extracts the descendant node while substitute display for the descendant node according to the descendant substitute display information is being performed" [Piotrowski, paragraph [0009] with Piotrowski, paragraph [0025]].

Claim 8 can be mapped to Piotrowski (as modified by Miller, Sumita and Gutle) as follows: "The tree-structured document transmitting and receiving system according to claim 5,

- wherein the multiplexed stream generation means of said tree-structured document transmitting apparatus further has node priority setting means of determining the importance of an information portion to be presented from each node to the receiving-side user on the basis of a content of the node, an attribute of the node, a content of the document, an attribute of the document, the tree structure, or a user instruction, and setting a node priority on the basis of the determination, [Piotrowski paragraph [0019]] and

- wherein, in the multiplexed stream generation means of said tree-structured document transmitting apparatus, said node priority presentation means presents the node priority set by said node priority setting means" [Piotrowski paragraph [0019]].

    Claim 9 can be mapped to Piotrowski (as modified by Miller, Sumita and Gutle) as follows: "The tree-structured document transmitting and receiving system according to claim 5,

- wherein said tree-structured document transmitting apparatus further has inter-document priority setting means of setting inter-document priorities on the basis of the contents of the documents, the attributes of the documents, the degrees of relation with a search word relating to a search request from the receiving-side user, a user instruction from a transmitting-side user, or a user instruction from the receiving-side user, [Sumita, cols. 21-22, lines 65-6 with Piotrowski, paragraph [0019]] and

- wherein, in said tree-structured document transmitting apparatus, said inter-document priority presentation means presents the inter-document priorities set by said inter-document priority setting means" [Sumita, cols. 21-22, lines 65-6 with Piotrowski, paragraph [0019]].

    Claims 27 and 29-31 encompass substantially the same scope of the invention as that of Claims 5 and 7-9, respectfully, in addition to a method and some steps for performing the system means of Claims 5 and 7-9, respectfully. Therefore, Claims 27

and 29-31 are rejected for the same reasons as stated above with respect to Claims 5

and 7-9, respectfully.

22.   Claims 20, 22, 42, and 44 are rejected under 35 U.S.C. 103(a) as being

unpatentable over U.S. Patent Application Publication No. 2003/0236903 (Piotrowski) in

view of U.S. Patent No. 5,790,937 (Gutle), further in view of U.S. Patent No. 5,907,841

(Sumita).

        For **Claim 20**, Piotrowski teaches: "A tree-structured document receiving

apparatus which receives a signal formed by converting on the basis of a predetermined

network protocol [Piotrowski, paragraph [0022] with Piotrowski, paragraph [0015] with

Piotrowski, Fig. 1] a … stream formed in such a manner that a node priority is set with

respect to each of nodes [Piotrowski, paragraph [0019] with Piotrowski, paragraph

[0017] with Piotrowski, paragraph [0022]] of a tree-structured document on the basis of

the importance of an information portion to be presented from the node to a receiving-

side user [Piotrowski, paragraph [0015] with Piotrowski, paragraphs [0007]-[0008] with

Piotrowski, paragraph [0025]] while satisfying two conditions: a first condition that the

node priority of the node is equal to or lower than that of a node which is an ancestor of

that node, [Piotrowski, paragraph [0017] with Piotrowski, paragraphs [0008]-[0009]] and

a second condition that if a plurality of nodes of the same priority exist, the nodes

necessarily constitute one subtree; [Piotrowski, paragraph [0017] with Piotrowski,

paragraphs [0008]-[0009]] node streams are formed [Piotrowski, paragraph [0022]] in

each of which, with respect to one of a plurality of tree-structured documents to be

presently transmitted, at least one of nodes or subtrees are arranged in a sequence on

the basis of the node priorities related to the tree-structured document; [Piotrowski,

paragraphs [0007]-[0008]] and the multiplexed stream is formed by multiplexing the

node streams relating to the tree-structured documents to be presently transmitted,

sequences in which at least one of the nodes or subtrees of the tree-structured

documents are arranged being placed in the multiplexed stream according to … set with

respect to the tree-structured documents containing the nodes or subtrees, [Piotrowski,

paragraphs [0007]-[0008]] said tree-structured document receiving apparatus having:

- receiving means of restoring the multiplexed stream from the signal received by

  the predetermined network protocol; [Piotrowski, paragraph [0015] with

  Piotrowski, paragraphs [0023]-[0025]]

- demultiplexing means of demultiplexing the multiplexed stream into the plurality

  of node streams contained in the multiplexed stream;

- …document-by-document decoding means [Piotrowski, paragraphs [0015] with

  Piotrowski, paragraphs [0023]-[0025]]…, and each including extraction means

  and reconstruction means, said extraction means extracting the at least one of

  the nodes or subtrees from said processing-assigned node stream according to

  the sequence of arrangement in the node stream, said reconstruction means

  adding the nodes or subtree in the extraction order to the tree-structured

  document under reconstruction; [Piotrowski, paragraph [0015] with Piotrowski,

  paragraphs [0023]-[0025]] and

- display means of displaying the tree-structured document under reconstruction in each document-by-document decoding means, the tree structure being displayed in the current reconstructed state at a corresponding position; [Piotrowski, paragraph [0025] with Piotrowski, paragraph [0009]]

- wherein, in the node stream, descendant substitute display information for substitute display on said display means for descendant nodes with respect to at least one of a node or a subtree existing as a parent of the descendant node is added immediately after at least one of the node or the subtree existing as a parent of the descendant node; [Piotrowski, paragraph [0017] with Piotrowski, paragraph [0018]]

- said extraction means in said document-by-document decoding means extracts at least one of the nodes or the subtrees and the descendant substitute display information from the node stream according to the sequence of arrangement in the node stream; [Piotrowski, paragraph [0017] with Piotrowski, paragraph [0018] with Piotrowski, paragraph [0015] with Piotrowski, paragraphs [0023]-[0025]]

- said reconstruction means in said document-by-document decoding means adds a substitute structure portion relating to the descendant substitute display information to the tree structure under reconstruction in place of the descendant node relating to the descendant substitute display information when said extraction means extracts the descendant substitute display information; and [Piotrowski, paragraph [0017] with Piotrowski, paragraph [0018] with Piotrowski, paragraph [0009]]

- wherein said display means displays said descendant substitute display

  information" [Piotrowski, paragraph [0018] with Piotrowski, paragraph [0025]].

  Piotrowski discloses the above limitations but does not expressly teach:

- "…multiplexed

- …inter-document priorities

- …demultiplexing means of demultiplexing the multiplexed stream into the plurality

  of node streams contained in the multiplexed stream;

- a plurality of …each assigned processing of one node stream in the plurality of

  node streams demultiplexed by said demultiplexing means"

  With respect to Claim 20, an analogous art, Gutle, teaches:

- "…multiplexed [Gutle, col. 2, lines 10-30]

- …demultiplexing means of demultiplexing the multiplexed stream into the

  plurality of node streams contained in the multiplexed stream;" [Gutle, col. 2,

  lines 10-30].

  With respect to Claim 20, an analogous art, Sumita, teaches:

- "…inter-document priorities" [Sumita, cols. 21-22, lines 65-6 with Piotrowski,

  paragraph [0019]].

  With respect to Claim 20 case law teaches:

- "…a plurality of …each assigned processing of one node stream in the plurality

  of node streams demultiplexed by said demultiplexing means" [*In re Harza*, 274

  F.2d 669, 124 USPQ 378 (CCPA 1960)].

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Sumita and Gutle with Piotrowski because the inventions are directed towards storing and transmitting files.

Sumita and Gutle's inventions would have been expected to successfully work well with Piotrowski's invention because the inventions use storage areas and transmit files. Piotrowski discloses a method and apparatus for structured streaming of an XML document comprising storage devices, however Piotrowski does not expressly disclose that the storage devices are tree-structured, presenting inter-document priorities, and transferring using multiplexing/demultiplexing. Sumita discloses a document detection system with improved document detection efficiency comprising displaying documents according to priority. Gutle discloses a method and apparatus for the distribution of multi-media documents comprising multiplexing and demutliplexing a stream of data.

It would have been obvious to one of ordinary skill in the art at the time of invention to take the multiplexing/demultiplexing from Gutle, and the presenting inter-document priorities from Sumita and install it into the invention of Piotrowski, thereby offering the obvious advantage of sending multiple things through a stream of data (increasing the speed), and displaying relevant documents first according to their priority.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Piotrowski such that Piotrowski has a plurality of document-by-document encoding and decoding means each assigned processing of one tree-structured document in a plurality of tree-structured documents to be

transmitted since it has been held that a duplication of parts with function (*In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960)) is obvious. In this case it is obvious because it would increase the speed of the Piotrowski so Piotrowski's invention does more than one document at a time.

Claim 22 can be mapped to Piotrowski (as modified by Sumita and Gutle) as follows: "The tree-structured document receiving apparatus according to claim 20, wherein said reconstruction means in said document-by-document decoding means immediately replaces the substitute tree-structured portion relating to the descendant substitute display information in the tree structure under reconstruction with the descendant node when said extraction means extracts the descendant node while substitute display for the descendant node according to the descendant substitute display information is being performed" [Piotrowski, paragraph [0009] with Piotrowski, paragraph [0025]].

Claims 42 and 44 encompass substantially the same scope of the invention as that of Claims 20 and 22, respectfully, in addition to a method and some steps for performing the system means of Claims 20 and 22, respectfully. Therefore, Claims 42 and 44 are rejected for the same reasons as stated above with respect to Claims 20 and 22, respectfully.

23.   Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication No. 2003/0236903 (Piotrowski) in view of U.S. Patent Application Publication No. 2001/0013046 (Katayama et al.).

For **Claim 45**, Piotrowski teaches: "A method comprising:

- transmitting a sequence of portions of a document, [Piotrowski, paragraph [0008]

  with Piotrowski, paragraph [0017]] said document including information defining

  document symbols and the locations of said document symbols on a page;

  [Piotrowski, paragraph [0017] with Piotrowski, paragraph [0022]]

- receiving some of said transmitted sequence of portions of said document;

  [Piotrowski, paragraph [0008] with Piotrowski, paragraph [0025]]

- displaying said received portions of said document; [Piotrowski, paragraph [0018]

  with Piotrowski, paragraph [0025] with Piotrowski, claim 8].

  Piotrowski discloses the above limitations but does not expressly teach:

- "…displaying substitute symbols in locations corresponding to portions of said

  document that have not been received."

  With respect to Claim 45, an analogous art, Katayama, teaches:

- "..displaying substitute symbols in locations corresponding to portions of said

  document that have not been received" [Katayama, paragraph [0012]].

  It would have been obvious to one of ordinary skill in the art at the time of

invention having the teachings of Katayama and Piotrowski before him/her to combine

Katayama with Piotrowski because both inventions are directed towards data

transmission.

Katayama's invention would have been expected to successfully work well with

Piotrowski's invention because both inventions use computers with data files and

portions of data files. Piotrowski discloses a method and apparatus for structured

streaming of an XML document (title) comprising displaying an XML or parts of an XML document(s). However, Piotrowski does not expressly disclose displaying substitute symbols in locations corresponding to portions of said document that have not been received. Katayama discloses a method and system of creating data for printing (title) comprising inserting dummy data (which must be symbols) for data not received.

It would have been obvious to one of ordinary skill in the art at the time of invention having the teachings of Katayama and Piotrowski before him/her to take the symbols from portions of a document that have not been received from Katayama and install it into the invention of Piotrowski, thereby offering the obvious advantage of knowing the number of unreceived data parts.

24.   Claim 46 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication No. 2003/0236903 (Piotrowski) in view of U.S. Patent Application Publication No. 2001/0013046 (Katayama et al.), further in view of "Ellipsis" (Wikipedia).

For **Claim 46**, Piotrowski (as modified by Katayama) teaches: "A method according to claim 45."

Piotrowski (as modified by Katayama) discloses the above limitations but does not expressly teach: "...wherein said displaying comprises displaying a repeated character in said locations corresponding to portions of said document that have not been received."

With respect to Claim 46, an analogous art, Wikipedia, teaches: "...wherein said displaying comprises displaying a repeated character in said locations corresponding to portions of said document that have not been received" [Wikipedia, p.1].

It would have been obvious to one of ordinary skill in the art at the time of invention having the teachings of Wikipedia and Piotrowski (as modified by Katayama) before him/her to combine Wikipedia with Piotrowski (as modified by Katayama) because both inventions are directed towards text/data.

Wikipedia's invention would have been expected to successfully work well with Piotrowski (as modified by Katayama)'s invention because both inventions use text/data with missing text/data. Piotrowski discloses a method and apparatus for structured streaming of an XML document (title) comprising displaying an XML or parts of an XML document(s). However, Piotrowski (as modified by Katayama) does not expressly disclose displaying a repeated character in said locations corresponding to portions of said document that have not been received. Wikipedia discloses the use of an Ellipsis comprising using it to represent omission of text/data.

It would have been obvious to one of ordinary skill in the art at the time of invention having the teachings of Wikipedia and Piotrowski (as modified by Katayama) before him/her to take the Ellipsis from Wikipedia and install it into the invention of Piotrowski (as modified by Katayama), thereby offering the obvious advantage of showing to the viewer missing information in the locations of the missing information.

Conclusion

25.   Any prior art made of record and not relied upon is considered pertinent to

applicant's disclosure. Applicant is advised that, although not used in the rejections

above, prior art cited on any PTO-892 form and not relied upon is considered materially

relevant to the applicant's claimed invention and/or portions of the claimed invention.

26.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Brent S. Stace whose telephone number is 571-272-

8372 and fax number is 571-273-8372. The examiner can normally be reached on M-F

9am-5:30pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Apu M. Mofiz can be reached on 571-272-4080. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

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Business Center (EBC) at 866-217-9197 (toll-free).

/B. S./
Examiner, Art Unit 2161

/Apu M Mofiz/

Supervisory Patent Examiner, Art Unit 2161